# MAESTRO

Touch Screen, Single Channel, Power & Energy Monitor


**1 Reads ALL Detector Types**
Thermopile, photo and pyroelectric detectors

**2 Large TOUCH SCREEN Color LCD Display**
- 5.6in Diagonal
- 640 x 480 Resolution
- 18bit Color
- FULLY Touch Screen Controls

**3 Unique Ergonomic Design**
Great for both handheld and tabletop use, with improved rubber bands and quick stand for better stability

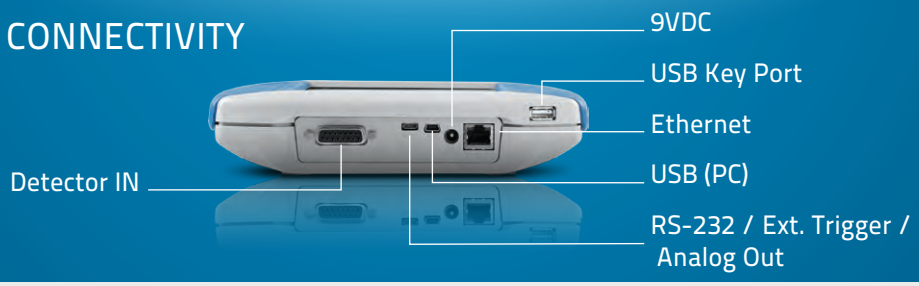
**4 Intuitive User Interface**
Easy to navigate interface, with many display features:
- Single or Dual Graph Display
- Instant access to the main functions
- Function Search tool

**5 USB Key Access**
Store data directly on a USB key

**6 Real-Time Statistical Functions**
Max, Min, Average, Standard Deviation, RMS and PTP Stability, Pulse # and Repetition Rate

**7 Available Outputs**
USB Key, Analog Output, RS-232, PC-USB, Ethernet

## CONNECTIVITY




## ACCESSORIES


Additional 9V Power Supply


Battery Pack


USB, RS-232, External Trigger & Analog Out Cables


Protective Pouch


Pelican Carrying Case

## SEE ALSO

# MAESTRO

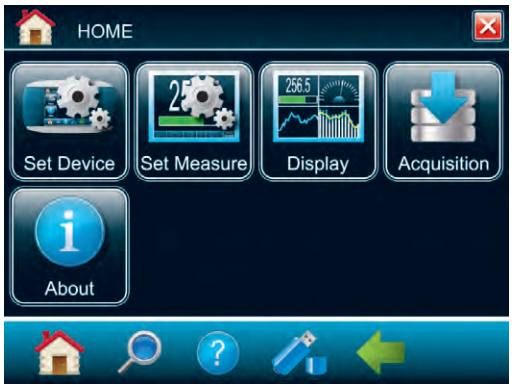
*Also traceable to NRC-CNRC

| | |
|---|---|
| **MODEL** | MAESTRO |
| **DETECTOR TYPES** | Thermopiles, Photo Detectors, Pyroelectrics |
| **DISPLAY** | Touch Screen 5.6in Color LCD |

| | |
|---|---|
| **POWER METER SPECIFICATIONS** | |
| Power Range | |
| Thermopile | 1 µW to 30 kW |
| Photo Detector | 4 pW to 3 W |
| Monitor Accuracy | 0.25 % ± 5 µV best scale |
| Statistics | Current Value, Max, Min, Average, Standard Deviation, RMS & PTP Stability, Time |
| **ENERGY METER SPECIFICATIONS** | |
| Energy Range | 0.1 µJ to 20 kJ |
| Monitor Accuracy | ±1 % best scale |
| Software Trigger Level | 0.1 to 99.9 %, 0.1 % resolution, default 2 % |
| Repetition Rate | 2 000 Hz / 10 000 Hz in sampling |
| Real Time Data Transfer (To USB key) | 2 000 Hz |
| Statistics | Current Value, Max, Min, Average, Std Dev., RMS & PTP Stability, Pulse #, Rep. Rate and Avg Power |
| **DETECTOR COMPATIBILITY** | |
| Thermopile | Average Power & Single Shot Energy |
| Photo Detector | Average Power |
| Pyroelectric | Pulse Energy |
| **GENERAL SPECIFICATIONS** | |
| Digital Display Size | 112.9 x 84.7 mm LCD - 640 x 480 pixels |
| Data Display | Real Time, Scope, Statistics, Digital Tuning Needle and Averaging |
| Analog Output | 0-1 Volt, Full Scale, ±0.5 % |
| Serial Commands Via | USB (standard), Ethernet or RS-232 (on special request) |
| Internet Upgrades Via | USB key |
| Data Storage Via | USB key |
| Dimensions | 210W x 122H x 45D mm |
| Weight (With Batteries) | 0.67 kg |
| Battery Type | 4 x Rechargeable 1.2 V Ni-MH AA |
| Battery Life | 6.5 hours |
| External Power Supply | 100/240 VAC 50-60 Hz to 9 VDC 1.66 A |
| **ORDERING INFORMATION** | |
| Full Product Name | MAESTRO |
| Product Number | 201235 |

Specifications are subject to change without notice

# MAESTRO




## HOME

Get access to all the functions of your MAESTRO with this unique HOME menu.

- **Set Device**: Set the Time & Date, the Number of Digits to be displayed and save your current settings.
- **Set Measure**: Use this menu to change the wavelength, the range, the measuring mode, the trigger level or the add corrections factors.
- **Display**: Set the device in Dual or Single display mode and choose the display you want.
- **Acquisition**: Set all your acquisition parameters (time, sample rate, etc.).


## DEVICE SETTINGS

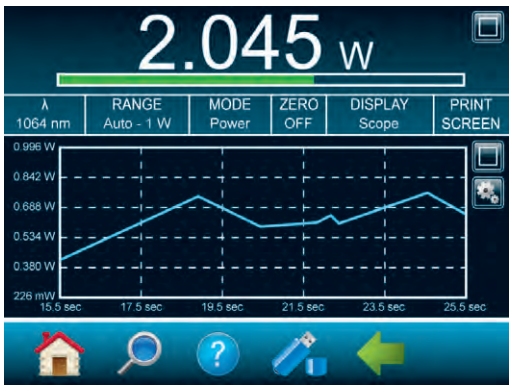
Just like on your computer, use the elements in this menu to set the parameters related to your MAESTRO:

- **Date & Time**: Set the date and time of the MAESTRO.
- **Colors**: Change the display colors so it corresponds to your laser goggles.
- **Power Management**: Choose how your MAESTRO uses its AC or battery power.
- **Number of Digits**: Use this menu to set the precision of the measurement.
- **Startup Configuration**: Choose how your parameters are stored and saved by the MAESTRO.


## MEASURE SETTINGS

Use the elements in this menu to set everything related to your measurements:

- **Wavelength**: Select one of the standard wavelengths offered, enter a custom value and create your own list of standard wavelengths.
- **Range**: Set the measuring range to autoscale or a fixed scale.
- **Measuring Mode**: Use this menu to decide what will type of measurement will be displayed, average power, energy, etc.
- **Corrections**: Enter multipliers and offsets.
- **Trig Level**: Set the trigger level, between 0.1% and 99.9%.




## DUAL DISPLAY (SHOWN WITH SCOPE DISPLAY)

With the Dual Screen mode, the MAESTRO really takes full advantage of its extra-large screen! Any display mode can be used in both single or dual display mode. In dual display mode, the Real Time display takes the upper portion of the screen, while any of the other displays (Scope, Needle, Averaging or Statistics) is set on the lower portion. The display in the lower portion can be easily changed using the parameters bar with drop-down menus in the center of the screen. You can also expand one of the displays to have it in single screen (full screen) mode using the ▣ button. Just as easily, you can go back to dual screen display by using the ▬ button.

Every functionality may not be availble yet

# MAESTRO

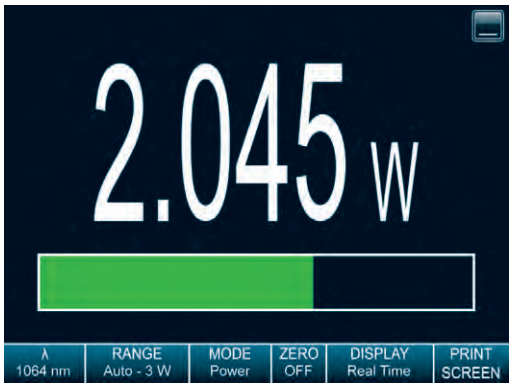
NIST* Traceable

*Also traceable to NRC-CNRC

## REAL TIME DISPLAY

This display shows the measured value in real time, with a corresponding bar graph below. The large size of the digits and high contrast of the graphics allows to see the measurement from a good distance. This mode is also always present in dual screen mode, in the upper portion of the screen.

- Very Large Digits
- Bargraph




## SCOPE DISPLAY

With it's line filling from the right of the screen, this display mode is a good approximation of an actual oscilloscope reading. Settings include time (x-axis) and range (y-axis). Basic statistics (min, max and average) can also be displayed directly on the screen.

- Fully customizable x and y axis
- Fast update rate


## NEEDLE DISPLAY

Exactly like an analog needle, only faster! This mode is particularly useful when tuning a laser. You can also choose to display the latest min and max values on the screen, with corresponding numerical values displayed in the uppper left corner.

- Ultra-fast readings (great for tuning)
- min and max hold


## AVERAGING DISPLAY

This very unique mode is perfect to show the trend of a laser over time. Set the number of points per batch and let the MAESTRO identify the minimum and maximum values of every batch. A yellow curve then follows the average of each batch, displayed as bars on the screen. The wider the difference between the white and blue portions of a bar (corresponding to the min and max values), the more unstable your laser is.

- Calculates the min, max and average values of batches of measurements
- Perfect to check laser stability over time


Every functionality may not be availble yet

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